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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ABRAHAM, ESAW T

ART UNIT PAPER NUMBER

2133

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/813,343

Applicant(s)

LEON ET AL.

Examiner

Esaw T. Abraham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 9, 15, 18, 21 and 22 is/are rejected.
- 7) ☒ Claim(s) 2-8, 11-14, 16-17, 19-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Final office action

Response to the applicant's amendments

Applicants' argument/amendments with respect to amended claims 1, 9, 15 and 18 have been considered but are not persuasive. The examiner would like to point out that this action is made final (MPEP 706.07a). Further upon further consideration, a new ground(s) of rejection is also made under 35 USC § 112, 1st paragraph. Applicants' argument/amendments with respect to amended claims 21 and 22 have been considered but are not persuasive. Therefore, the response (to reject claims 21 and 22) in the previous office action made on 04/06/05 stands active.

In view of the amendment filed on 10/11/05, the Examiner withdraws all objections to the claims (1,2,9,15,21,22 and 24).

In view of the Amendment filed 10/11/05, the examiner withdraws the previous 35 USC § 101 rejections to claims 15 and 22 in the previous Office Action filed on 04/06/05.

Response to the applicant's argument

Remark pages 8-10, the applicant argues that the prior art of record Gupta does not teach transmitting data via point to multipoint session, determining if any expected data was not received and retransmitting the requested or expected data. However, Gupta et al. teach or disclose a method and an apparatus for efficient and reliable multicasting in a network environment and a sender transmits data packets to a plurality of receivers wherein periodically, receivers submit responses that include control information regarding the loss (expected data not received) or receipt of data packets

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transmitted by the sender and using these information a sender retransmits any undelivered packets to intended receivers (see col. 6, lines 14-23 and abstract).

Therefore, the applicants' argument although acknowledged, has not been found to be convincing. The applicant further argues that the prior art (Gupta et al.) do not disclose how to schedule point-to-point sessions. However, Gupta et al. teach that the decision of when to multicast and when to unicast lost packets may be made according to a heuristic (scheduled) (an analytically calculated predetermined approach), or based on the number of participating receivers and responses submitted by them at the time of retransmission (see col. 12, lines 47-51) which is basically the same method except the applicant uses different expression such as scheduling repair session etc.... Therefore, the applied reference have been applied appropriately

1. Claims 1-24 remained pending.

Claim objections

2. Claims 1, 9, 15, 18, 23 and 24 are objected to because of the following informalities:

Please change the phrase to "requesting expected" to ---requesting expected data--- (see line 6 of claim 23).

Please change the phrase to "requesting that the expected" to ---requesting that the expected data--- (see line 7 of claim 1).

Please change the phrase to "system capable of repairing data" to ---system for repairing data--- (see lines 1 and 2 of claim 9).

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Please change the phrase "a sender device capable of transmitting data" to ---a sender device for transmitting data--- (see claim 9, lines 3).

Please change the phrase "plurality of receivers capable of receiving data" to ---plurality of receivers for receiving data--- (see claim 9, lines 5).

Please change the phrase to "the expected" to ---the expected data--- (see line 10 of claim 15).

Please change the phrase to "requesting expected by not" to ---requesting expected data but not--- (see line 6 of claim 18).

Please change the phrase to "the expected" to ---the expected data--- (see line 7 of claim 18).

Please change the phrase to "the expected but not yet received" to ---the expected data but not received--- (see line 7 of claim 18).

Please change the phrase to "requesting that the expected" to ---requesting that the expected data--- (see line 10 of claim 23).

Please change the phrase "a sender device capable of transmitting" to ---a sender device for transmitting--- (see claim 24, lines 3).

Please change the phrase "plurality of receivers capable of receiving " to ---plurality of receivers for receiving--- (see claim 24, lines 5).

Claim Rejections - 35 USC § 112, 1st paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact

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terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims **1, 9, 15 and 18** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventor(s), at the time application was filed, had possession of the claimed invention.

Claims 1, 9, 15 and 18 recite, "retransmitting all of the requested data" (as in claims 1 and 9) "all of the expected " (as in claims 15 and 18). Note; page 3, paragraph (0049 and 0050) of the Applicant's specification teaches that the sender retransmits the requested data packets to the receivers via the point-to-multipoint session. Nowhere in the specification does the Applicant teach "retransmitting from the sender **all of the requested or all of expected**"

The newly introduced limitations are **new matter**.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S. C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application

filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims **1, 9, 15 and 18** are rejected under 35 U.S.C. 102(e) as being anticipated by Gupta et al. (U.S. PN: 6,577,599).

As per claims 1, 9 and 18:

Gupta et al. teach or disclose a method and an apparatus for efficient and reliable multicasting in a network environment and a sender transmits identical information encapsulated in data packets to a plurality of receivers wherein periodically, receivers submit responses that include control information regarding the loss (expected data not received) or receipt of data packets transmitted by the sender and using these information a sender retransmits any undelivered packets to intended receivers (see col. 6, lines 14-23 and abstract). Gupta et al. in figure 3, step (310) teach that the sender analyzes data-loss response generated by the receiver and further adjusts the response rate at step (330), so that the multicasting (point-to-multipoint) of

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information is accomplished most optimally (i.e. minimizing the network traffic, and maximizing error recovery and repair) (see col. 9, lines 28-39).

As per claim 15:

Gupta et al. teach all the subject matter claimed in claims 1 and 9 including Gupta et al. teach a system comprising a processor, a memory, code executed by said processor configured to multicast information to a plurality of receivers in a computer network, said code comprising a method for transmitting information to one or more receivers, a method for receiving one or more responses from said one or more receivers and a method for retransmitting information to said one or more receivers based on said one or more responses (see col. 13, lines 11-12 and claim 5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere CO.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claims **21 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gupta et al. (U.S. PN: 6,577,599).

As per claims 21 and 22:

Gupta et al. teach all the subject matter claimed in claim 15 including Gupta et al. teach that the decision of when to multicast and when to unicast lost packets may be made according to a heuristic (scheduled) (an analytically calculated predetermined approach), or based on the number of participating receivers and responses submitted by them at the time of retransmission (see col. 12, lines 47-51). Gupta et al. **do not explicitly teach** scheduling point-to-multipoint (multicasting) repair session. **However**, Gupta et al. in figure 5 step (510) teach a flow diagram in which data is retransmitted and determined whether many receivers have reported an information packet missing if so, then that packet is multicast to the receivers participating in the multicast session, at step (530) and the receivers that have already received the packet will simply ignore the newly retransmitted information. If a few receivers have failed to acknowledge the receipt of the information packet, however, the sender individually transmits (unicasts) that packet to each of those few receivers, at step (520) (see col. 12, lines 30-50). Further, Gupta et al. teach that the decision of when to multicast and when to unicast lost packets may be made according to a heuristic (scheduled) (an analytically calculated predetermined approach), or based on the number of participating receivers and responses submitted by them at the time of retransmission (see col. 12, lines 47-

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51) which the system of Gupta et al. basically teaching the same method of repairing data or packets. **Therefore**, it would have been obvious to a person having an ordinary skill in the art at the time the invention was made to follow the examples of data retransmission (for example see col. 25-63) and to follow the flow chart of figure to repair specific receivers. **This modification** would have been obvious because a person having ordinary skill in the art would have been motivated to do so because it would be relatively and yet high reliable in operation

Allowable subject matter

6. Claims **2-8, 10-14, 6-17 and 19-20** are objected to as being dependent upon a rejected base claim but would be allowable if rewritten independent from including all of the limitation of the base claim and any intervening claims.

The claimed invention comprising after the sender retransmitted data, if some data was still not received, scheduling point-to-point repair sessions for specific receivers that expected data that was not received (as in claim 2) which the prior art do not teach or render obvious.

Claims 3-8, which are directly or indirectly dependents of claim 2 are also objected.

The claimed invention comprising wherein the sender device is further configured to schedule point-to-point data repair sessions with the plurality of receivers after retransmission of the requested data and the sender is configured to send expected but

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not received data to the plurality of receivers via point-to-point system (as in claim 10) which the prior art do not teach or render obvious.

Claims 11-14, which are directly or indirectly dependents of claim 10 are also objected.

The claimed invention comprising wherein the computer code is further configured to scheduled point-to-point data repair sessions after retransmission of the expected but not received data (as in claim 16) which the prior art do not teach or render obvious.

The claimed invention comprising wherein the computer code is further configured to determine the number of receivers on the point-to-multipoint session and schedule the point-to-point data repair sessions based on the determined number of receivers (as in claim 17) which the prior art do not teach or render obvious.

7. Claims **23 and 24** would be allowable if rewritten to overcome the claim objections, set forth in this Office action.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Cam et al. (Efficient ARQ schemes for point-to-multipoint communication, IEEE international conference on communications 23-26 June 1991; on pages 1627-1632 vol. 3)

b) Lin et al. (RMTP: a reliable multicast transport protocol; INFOCOM '96. Fifteenth Annual joint conference of the IEEE computer societies. Networking the Next generation. Proceeding IEEE; 24-28 March 1996, on page(s); 1414-1424 vol. 3)

10. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Esaw Abraham whose telephone number is (571) 272-3812. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are successful, the examiner's supervisor, Albert DeCady can be reached on (571) 272-3819. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300.

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Information regarding the status of an Application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or PUBLIC PAIR. Status information for unpublished applications is available through Private Pair only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Esaw Abraham

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GUY LAMARRE
PRIMARY EXAMINER